

PROJECT 10073 RECORD CARD

1. DATE 22 April 1963		2. LOCATION Kauai, Hawaii		12. CONCLUSIONS <input type="checkbox"/> Was Balloon <input type="checkbox"/> Probably Balloon <input type="checkbox"/> Possibly Balloon <input type="checkbox"/> Was Aircraft <input checked="" type="checkbox"/> Probably Aircraft <input type="checkbox"/> Possibly Aircraft <input type="checkbox"/> Was Astronomical <input type="checkbox"/> Probably Astronomical <input type="checkbox"/> Possibly Astronomical <input type="checkbox"/> Other _____ <input type="checkbox"/> Insufficient Data for Evaluation <input type="checkbox"/> Unknown	
3. DATE-TIME GROUP Local _____ GMT 23/0608Z		4. TYPE OF OBSERVATION <input checked="" type="checkbox"/> Ground-Visual <input type="checkbox"/> Ground-Radar <input type="checkbox"/> Air-Visual <input type="checkbox"/> Air-Intercept Radar			
5. PHOTOS <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No		6. SOURCE Civilian			
7. LENGTH OF OBSERVATION 4 minutes		8. NUMBER OF OBJECTS one		9. COURSE SE or E	
10. BRIEF SUMMARY OF SIGHTING Reddish light same size as star in flight to SE or E observed at 80 dgr elevation in NW.				11. COMMENTS Jet a/c reported in area at high altitude at this time w/afterburner. Object conforms with this description and case evaluated as a/c. Echo over ATLANTIC OCEAN.	

DEPARTMENT OF THE AIR FORCE
STAFF MESSAGE BRANCH
UNCLASSIFIED MESSAGE

INCOMING

AF IN : 49289 (25 Apr 63)S/der

Page 1 of 2

NNNN

INFO : NIN-9, XOP-1, XOPX-4, SAF-OS-3, ARMY-2, NAVY-2, CMC-8,
JCS-35, OSD-15, CIA-11, NSA-7, DIA-20, DIA/CIIC-2 -120-

01

SMB B168

A900

OO RUECW RUKAC RUEAHQ

DE RUHLKH 7

ZNR

O 250639Z

M 326 AIR DIV KUNIA FACILITY HAWAII

TO RUHLKM/PWCAF HICKAM AFB HAWAII

RUKAC/COMALSEAFRON KODIAK ALASKA

RUWSPG/COMWESTSEAFRON SAN FRANCISCO CALIF

RUHPQ/COMHAWSEAFRON PEARL HARBOR HAWAII

INFO RUEAHQ/COFS USAF WASHINGTON DC

RUWGALB/CINCINORAD ENT AFB COLO

RUHPHQKCINCPAC CAMP H M SMITH HAWAII

RUHAFS/KINCUSARPAC FT SHAFTER HAWAII

RUHPE/CINCPACFLT PEARL HARBOR HAWAII

RUUAJAZ/COMUSJAPAF FUCHU AS JAPAN

RUAMCR/COMUSKOREA SEOUL KOREA

RUAGFL/COMUSTDC TAIPEI TAIWAF

RUHPD/COMASWFORPAC FORD ISLAND HAWAII

RUCSBR/CINCSAC OFFUTT AFB NEB

25 APR

0605Z

0519

318.72

0604

-138.81

30°N

181°W

30°N

181°W

⇒ SE

DEPARTMENT OF THE AIR FORCE
STAFF MESSAGE BRANCH
UNCLASSIFIED MESSAGE

I N C O M I N G

AF IN : 49289 (25 Apr 63)

Page 2 of 2

NNNN

RUECW/CNO WASHINGTON DC

RUECW/SECNAV WASHINGTON DCN

AF GRNC

BT

UNCLAS/CIRVIS MR. [REDACTED] A NON-MILITARY RES-

VIDENT OF PORT ALLEN, KAUAI, HAWAII SIGHTED A HIGH BRIGHT OB-
JECT, STAR LIKE, MOVING SLOW FROM WEST SOUTHWEST TO EAST
SOUTHEAST AT 25/0605Z.

NO EVALUATION AT THIS TIME.

OF NOTE JET AIRCRAFT ON HIGH SPEED TEST RUNS IN THE
AREA AT THIS TIME.

BT NOTE: ADV CYS DEL TO XOPX. NIN, AND DIA.

25/0645Z APR RUHLKH

SATELLITE 1960 DATA I FOR OTHER LATITUDES										SATELLITE 1960 DATA I FOR OTHER LATITUDES									
RELATION DATA		LAT.	TIME (GMT)	SOUTH-SOUTH			TIME (GMT)	NORTH-SOUTH			LAT.	TIME (GMT)	SOUTH-SOUTH			TIME (GMT)	NORTH-SOUTH		
TIME (GMT)	DATE			TIME (GMT)	DATE	TIME (GMT)		TIME (GMT)	DATE	TIME (GMT)			TIME (GMT)	DATE	TIME (GMT)		TIME (GMT)	DATE	
APRIL 21, 1963																			
1	20.0	241.19	47.4	10.8	-05.84	877	90.0	28.8	-37.73	877	90.0	1	20.0	241.19	47.4	10.8	-05.84	877	90.0
2	22.4	270.23	45.0	22.7	-06.81	890	72.5	33.0	-104.55	867	107.5	2	22.4	270.23	45.0	22.7	-06.81	890	72.5
3	18.4	244.50	40.0	19.5	-05.54	902	60.8	38.0	-119.85	861	119.2	3	18.4	244.50	40.0	19.5	-05.54	902	60.8
4	5.7	272.74	35.0	15.5	-07.90	913	54.1	43.0	-127.74	857	127.4	4	5.7	272.74	35.0	15.5	-07.90	913	54.1
5	2.3	257.02	30.0	13.0	-08.57	917	40.4	48.0	-135.89	856	135.6	5	2.3	257.02	30.0	13.0	-08.57	917	40.4
6	17.5	27.41	25.0	11.0	-07.09	938	43.7	53.0	-145.21	849	145.7	6	17.5	27.41	25.0	11.0	-07.09	938	43.7
7	12.0	25.00	20.0	9.0	-05.00	960	39.0	57.0	-155.57	836	155.0	7	12.0	25.00	20.0	9.0	-05.00	960	39.0
8	6.0	25.44	15.0	7.0	-03.25	980	43.7	60.0	-167.05	825	167.0	8	6.0	25.44	15.0	7.0	-03.25	980	43.7
9	0.0	254.65	10.0	5.0	-01.40	998	49.4	63.0	-179.57	813	179.5	9	0.0	254.65	10.0	5.0	-01.40	998	49.4
10	15.0	167.34	5.0	4.0	01.18	1000	54.0	65.0	-192.24	803	192.0	10	15.0	167.34	5.0	4.0	01.18	1000	54.0
11	10.0	167.04	0.0	3.0	03.45	982	60.8	67.0	-205.11	794	205.1	11	10.0	167.04	0.0	3.0	03.45	982	60.8
12	10.0	202.12	-45.0	-24.3	05.13	987	72.4	68.0	-218.41	785	218.4	12	10.0	202.12	-45.0	-24.3	05.13	987	72.4
13	20.0	202.12	-47.4	-27.6	07.50	978	90.0	69.0	-231.56	776	231.6	13	20.0	202.12	-47.4	-27.6	07.50	978	90.0
APRIL 22, 1963																			
1	25.1	211.50	51.4	18.9	-01.67	881	90.0	25.1	-02.71	880	90.0	1	25.1	211.50	51.4	18.9	-01.67	881	90.0
2	20.0	260.58	45.0	21.8	-00.85	894	72.5	30.0	-104.55	867	107.5	2	20.0	260.58	45.0	21.8	-00.85	894	72.5
3	15.4	281.77	40.0	19.7	-05.53	907	60.8	35.0	-119.85	861	119.2	3	15.4	281.77	40.0	19.7	-05.53	907	60.8
4	11.4	315.05	35.0	18.4	-11.09	917	54.1	40.0	-127.74	857	127.4	4	11.4	315.05	35.0	18.4	-11.09	917	54.1
5	6.0	310.11	30.0	13.0	-27.56	925	40.4	45.0	-135.89	856	135.6	5	6.0	310.11	30.0	13.0	-27.56	925	40.4
6	2.0	17.32	25.0	9.0	-17.27	941	43.7	48.0	-145.21	849	145.7	6	2.0	17.32	25.0	9.0	-17.27	941	43.7
7	17.3	36.50	20.0	7.0	-05.00	960	39.0	53.0	-155.57	836	155.0	7	17.3	36.50	20.0	7.0	-05.00	960	39.0
8	12.0	36.69	15.0	5.0	-03.25	980	43.7	57.0	-167.05	825	167.0	8	12.0	36.69	15.0	5.0	-03.25	980	43.7
9	6.0	104.61	10.0	4.0	-01.40	998	49.4	60.0	-179.57	813	179.5	9	6.0	104.61	10.0	4.0	-01.40	998	49.4
10	0.0	104.05	5.0	3.0	01.18	1000	54.0	63.0	-192.24	803	192.0	10	0.0	104.05	5.0	3.0	01.18	1000	54.0
11	10.0	167.04	0.0	2.0	03.45	982	60.8	65.0	-205.11	794	205.1	11	10.0	167.04	0.0	2.0	03.45	982	60.8
12	10.0	202.12	-45.0	-24.3	05.13	987	72.4	67.0	-218.41	785	218.4	12	10.0	202.12	-45.0	-24.3	05.13	987	72.4
13	20.0	202.12	-47.4	-27.6	07.50	978	90.0	68.0	-231.56	776	231.6	13	20.0	202.12	-47.4	-27.6	07.50	978	90.0
APRIL 23, 1963																			
1	24.9	250.19	47.4	29.0	-22.65	894	90.0	29.0	-02.69	893	90.0	1	24.9	250.19	47.4	29.0	-22.65	894	90.0
2	20.3	270.97	45.0	23.9	-00.85	899	72.5	34.1	-104.55	870	107.5	2	20.3	270.97	45.0	23.9	-00.85	899	72.5
3	15.4	305.15	40.0	19.7	-05.53	913	60.8	39.2	-119.85	861	119.2	3	15.4	305.15	40.0	19.7	-05.53	913	60.8
4	11.0	330.34	35.0	18.4	-11.09	924	54.1	44.2	-127.74	856	127.4	4	11.0	330.34	35.0	18.4	-11.09	924	54.1
5	6.4	7.52	30.0	13.0	-27.56	931	40.4	49.0	-135.89	856	135.6	5	6.4	7.52	30.0	13.0	-27.56	931	40.4
6	1.8	36.00	25.0	9.0	-17.27	946	43.7	54.0	-145.21	849	145.7	6	1.8	36.00	25.0	9.0	-17.27	946	43.7
7	17.1	65.89	20.0	7.0	-05.00	962	39.0	59.0	-155.57	836	155.0	7	17.1	65.89	20.0	7.0	-05.00	962	39.0
8	12.0	65.02	15.0	5.0	-03.25	983	43.7	64.0	-167.05	825	167.0	8	12.0	65.02	15.0	5.0	-03.25	983	43.7
9	6.0	124.25	10.0	4.0	-01.40	999	49.4	69.0	-179.57	813	179.5	9	6.0	124.25	10.0	4.0	-01.40	999	49.4
10	0.0	123.63	5.0	3.0	01.18	1000	54.0	74.0	-192.24	803	192.0	10	0.0	123.63	5.0	3.0	01.18	1000	54.0
11	10.0	182.62	-45.0	-24.3	05.13	987	72.4	79.0	-205.11	794	205.1	11	10.0	182.62	-45.0	-24.3	05.13	987	72.4
12	10.0	211.80	-47.4	-27.6	07.50	978	90.0	84.0	-218.41	785	218.4	12	10.0	211.80	-47.4	-27.6	07.50	978	90.0
APRIL 24, 1963																			
1	29.3	260.98	47.4	29.0	-02.63	888	90.0	29.0	-02.67	888	90.0	1	29.3	260.98	47.4	29.0	-02.63	888	90.0
2	24.7	270.14	45.0	23.9	-00.82	905	72.5	34.1	-104.55	872	107.5	2	24.7	270.14	45.0	23.9	-00.82	905	72.5
3	20.3	290.35	40.0	19.8	-05.50	919	60.8	39.2	-119.85	862	119.2	3	20.3	290.35	40.0	19.8	-05.50	919	60.8
4	15.4	328.51	35.0	16.7	-11.07	930	54.1	44.3	-127.74	856	127.4	4	15.4	328.51	35.0	16.7	-11.07	930	54.1
5	10.0	357.71	30.0	14.0	-28.54	939	40.4	49.0	-135.89	853	135.6	5	10.0	357.71	30.0	14.0	-28.54	939	40.4
6	6.2	26.89	25.0	9.1	-17.26	955	43.7	54.0	-145.21	846	145.7	6	6.2	26.89	25.0	9.1	-17.26	955	43.7
7	1.0	56.08	20.0	7.0	-05.00	976	39.0	59.0	-155.57	838	155.0	7	1.0	56.08	20.0	7.0	-05.00	976	39.0
8	16.9	85.26	15.0	5.0	-03.24	990	43.7	64.0	-167.05	829	167.0	8	16.9	85.26	15.0	5.0	-03.24	990	43.7
9	6.0	134.64	10.0	4.0	-01.41	991	49.4	69.0	-179.57	820	179.5	9	6.0	134.64	10.0	4.0	-01.41	991	49.4
10	0.0	143.62	5.0	3.0	01.19	989	54.0	74.0	-192.24	811	192.0	10	0.0	143.62	5.0	3.0	01.19	989	54.0
11	10.0	172.91	-45.0	-24.3	05.13	986	72.4	79.0	-205.11	802	205.1	11	10.0	172.91	-45.0	-24.3	05.13	986	72.4
12	10.0	201.39	-47.4	-27.6	07.51	977	90.0	84.0	-218.41	793	218.4	12	10.0	201.39	-47.4	-27.6	07.51	977	90.0
13	20.0	201.37	-47.4	-27.6	07.49	962	90.0	89.0	-231.56	784	231.6	13	20.0	201.37	-47.4	-27.6	07.49	962	90.0

MODELED & PLOTTED FOR PAPER SATELLITE TRACK DATA I

REFERENCE TRACK FOR 1963: 14 M 13 D 10H 20.20 M LT
EQUINOXIAL: 1963.0
APPROXIMATE SINE WAVELENGTH: 200.34 DEG. WEST
PERIOD: 10.000000 MIN. PER PERIOD
ARGUMENT OF PERIGEE: 95.85 DEG.
RATE OF CHANGE: 0.45413 DEG. PER PERIOD
ANOMALISTIC PERIOD: 105.949 MIN.
RATE OF CHANGE: 0.00017 MIN. PER PERIOD
ECCENTRICITY: 0.00007
PERIODE OF PERIGEE: 495.6 MILES
PERIODE OF APHEE: 497.3 MILES
RATE OF CHANGE: 0.000000 MIN. PER PERIOD

MODELED ORBITAL PARAMETERS FOR SATELLITE 1960 DATA I

REFERENCE TIME 1963 J. 4 M 12.1 E. H. 20.00 M UT
 INCLINATION 51.4 DEG.
 ASCENDING NODE (JULY) 209.3 DEG. WEST
 PERIOD 1459.1 MIN.
 PERIOD OF PERIGEE 15.85 DEG.
 RATE OF CHANGE 0.45413 DEG. PER PERIOD
 ANOMALISTIC PERIOD 155.349 MIN.
 RATE OF CHANGE 0.000017 MIN. PER PERIOD
 ECCENTRICITY 0.00007
 PERIGEE 405.6 MILES
 APOGEE 402.1 MILES
 RATE OF CHANGE 0.117 MILES PER DAY
 ASCENDING NODE (JULY) 13.34 DEG.
 RATE OF CHANGE -0.26940 DEG. PER DAY
 LATITUDE OF PERIGEE 47.04 DEG.

DEPARTMENT OF THE AIR FORCE
STAFF MESSAGE BRANCH
UNCLASSIFIED MESSAGE

INCOMING

NNNN

AF IN : 48234 (24 Apr 63) A/hk

Pg 1 of 2

INFO : NIN-9, XOP-1, XOPX-4, SAF-OS-3, ARMY-2, CMC-8, JCS-35,
OSD-15, CIA-11, NSA-7, DIA-20, DIA-CIIC-2 (118)

01

SMB B278

..... ZZ RUEAHQ

ZNR ZFD

KHB688

..... ZZ RUHLKM RUHPA RUHPB RUHPD RUHPQ RUHAFS RUAGFL RUUAZ RUAMCR
DE RUHLKH 3

ZNR

Z 230720Z

FM 326 AIR DIV KUNIA FACILITY HAWAII

TO RUHLKM/PACAF HICKAM AFB HAWAII

RUHAC/COMALSEAFROM KODIAK ALASKA

RUWSPG/COMWESTSEAFROM SAN FRANCISCO CALIF

RUHPQ/COMHAWSEAFRON PEARL HARBOR HAWAII

INFO RUEAHQ/COFS USAF WASHINGTON D C

RUWGALB/CINCNO RAD ENT AFB COLO

RUHPA/CINCPAC CAMP H M SMITH HAWAII

RUHAFS/CINCUSARPAC FT SHAFTER HAWAII

0515 209.15
0545 82.65

116.50

0515 209.15
48.15

209.15
-148.18

61.00
20°N - 0603.5 61°W

ECHO AT 20°N 61°W

NOT OVER PACIFIC

DEPARTMENT OF THE AIR FORCE
STAFF MESSAGE BRANCH
UNCLASSIFIED MESSAGE

I N C O M I N G

AF IN : 48234 (24 Apr 63)

Pg 2 of 2

RUHPB/CINCPACFLT PEARL HARBOR HAWAII
RUUAZ/COMUSJAPAF FUCHU AS JAPAN
RUAMCR/COMUSKOREA SEOUL KOREA
RUAGFL/COMUSTDC TAIPEI TAIWAF
RUHPD/COMASWFORPAC FORD ISLAND HAWAII
RUCSBR/CINCSAC OFFUTT AFB NEBR
RUECW/CNO WASHINGTON DC
RUECW/SECNAV WASHINGTON DC
AF GRNC

BT

UNCLAS/CIRVIS REPORT ~~XXXXXXXXXX~~ A NON-MILITARY RESIDENT OF
PORT ALLEN KAUAI HAWAII REPORTED SIGHTING A REDISH LIGHT SAME
SIZE AND COLOR AS A STAR 80 DEGREES ABOVE THE HORIZON MOVING
FROM THE NORTHWEST TOWARDS THE SOUTHEAST OR EASTERLY AT 23/0608Z
FOR ABOUT FOUR MINUTES. NO EVALUATION AT THIS TIME.

OF NOTE. JET AIRCRAFT WERE ON A HIGH ALTITUDE TEST RUN IN THE
AREA AT THIS TIME ANS IN AFTERBURNER.

BT NOTE: ADVANCE COPY DELIVERED TO XOPX, DIA, NIN,
SUSPECTED DUPE OF AF IN 45464 (23 Apr 63)

23/0730Z APR RUHLKH

DEPARTMENT OF THE AIR FORCE
STAFF MESSAGE BRANCH
UNCLASSIFIED MESSAGE

INCOMING

01

AF IN : 45464 (23 Apr 63) C/doc

Page 1 of 2

INFO : DIA-20, DIA/CIIC-2, XOP-1, XOPX-4, NIN-9, SAF-OS-3, ARMY-2
CMC-8, JCS-35, OSD-15, CIA-11, NSA-7 -118-

SMB A153

ZCHQA768ZCUJA168

***** ZZ RUEAHQ

DE RUHLKH 3H

ZNR

Z 230720Z

FM 326 AIR DIV KUNIA FACILITY HAWAII

TRUHPKM/PWCAF HICKAM AFB HAWAII

RUKAC/COMALSEAFRON KODIAK ALASKA

RUWS/PG/COMWESTSEAFRON SAN FRANCISCO CALIF

RUHPQ/COMHAWSEAFRON PEARL HARBOR HAWAII

INFO RUEAHQ/COFS USAF WASHINGTON DC

RUWGALB/CINCINORAD ENT AFB COLO

RUHPHQKCINCPAC CAMP H M SMITH HAWAII

RUHAFS/KINCUSARPAC FT SHAFTER HAWAII

RUHPB/CINCPACFLT PEARL HARBOR HAWAII

RUAUUZ/COMUSJAPAF FUCHU AS JAPAN

RUAMCR/COMUSKOREA SEOUL KOREA

RUAGFL/COMUSTDC TAIPEI TAIWAF

RUHPD/COMASWFORPAC FORD ISLAND HAWAII

DEPARTMENT OF THE AIR FORCE
STAFF MESSAGE BRANCH
UNCLASSIFIED MESSAGE

I N C O M I N G

AF IN : 45464 (23 Apr 63)

Page 2 of 2

RUCSBR/CINCSUC OFFUTT AFB NEB

RUECW/CNO WASHINGTON DC

RUECW/SECNAV WASHINGTON DCN

AF GRNC

5

UNCLAS/CIRVIS REPORT MR [REDACTED], A NON-MILITARY RESIDENT OF
PORT ALLEN KAUAI HAWAII REPORTED SIGHTING A REDISH LIGHT SAME
SIZE AND COLOR AS A STAR 80 DEGREES ABOVE THE HORIZON MOVING
FROM THE NORTHWEST TOWARDS THE SOUTHEAST OR EASTERLY YAZ 23/0608Z
FOR ABOUT FCR MINUTES. NO EVALUATION AT THIS TIME.

OF NOTE. ~~J~~ET AIRCRAFT WERE ON ~~NA~~ HIGH ALTITUDE TEST RUN IN THE
AREA AT THIS TIME AND IN AFTER BURNER.

BT

NOTE: ADVANCE COPY TO DIA, NIN & XOPX.

223/# 0730Z APR RUHLKH

DEPARTMENT OF THE AIR FORCE
STAFF MESSAGE BRANCH
UNCLASSIFIED MESSAGE

I N C O M I N G

AF IN : 45509 (23 Apr 63) C/doc

Page 1 of 2

INFO : DIA-20, DIA/CIIC-2, NIN-9, XOP-1, XOPX-4, SAF-OS-3, ARMY-2
CMC-8, JCS-35, OSD-15, NSA-7, CIA-11 -118-

B 157
NNNNSWA879LKA215KHA803

..... ZZ RUECW

DE RUHLKH 107S

ZNR

UNCLAS SVC ZUI DE RUEC 144P X CITING PWA 120

KHB689

..... ZZ RUWSPG RUECW RUKAC RUEAHQ RUWGALB RUCSBR

DE RUHLKH 3H

ZNR

Y 230720Z

FM 326 AIR DIV KUNIA FACILITY HAWAII

TO RUHLKM/PWCAF HICKAM AFB HAWAII

RUKAC/COMALSEAFRON KODIAK ALASKA

RUWS/PG/COMWESTSEAFRON SAN FRANCISCO CALIF

RUHPQ/C OMHAWSEAFRON PEARL HARBOR HAWAII

INFO RUEAHQ/COFS USAF WASHINGTON DC

RUWGALB/CINCNOAD ENT AFB COLO

RUHPHQKCINCPAC CAMP H M SMITH HAWAII

RUHAFS/KINCUSARPAC FT SHAFTER HAWAII

RUHPB/CINCPACFLT PEARL HARBOR HAWAII

RUUAZ/COMUSJAPAF FUCHU AS JAPAN

RUAMCR/COMUSKOREA SEOUL KOREA

RUAGFL/COMUSTDC TAIPEI TAIWAF

DEPARTMENT OF THE AIR FORCE
STAFF MESSAGE BRANCH
UNCLASSIFIED MESSAGE

INCOMING

AF IN : 45509 (23 Apr 63)

Page 2 of 2
NNNN

RUCSBR/CINCSAC OFFUTT AFB NEB

RUECW/CNO WASHINGTON DC

RUECW/SECNAV WASHINGTON DCN

AF GRNC

BT

TUNCLAS/CIRVIS REPORT MR. [REDACTED] A NON-MILITARY RESIDENT OF
PORT ALLEN KAUAI HAWAII REPORTED SIGHTING A REDISH LIGHT SAME
SIZE AND COLOR AS A STAR 80 DEGREES ABOVE THE HORIZON MOVING
FROM THE NORTHWEST TOWARDS THE SOUTHEAST OR EASTERLY AT 23/0608Z
FOR ABOUT FOUR MINUTES. NO EVALUATION AT THIS TIME.

OF NOTE. JET AIRCRAFT WERE ON A HIGH ALTITUDED TEST RUN IN THE
AREA AT THIS TIME AND IN AFTERBURNER.

BT

23/0730Z APR RUHLKH

NOTE: ADVANCE COPY TO DIA, NIN & XOPX.
CORRECTED COPY OF AF IN : 45464 (23 Apr 63)

ECLIPSE			SATURDAY 1960 JUNE 1							
S-E			FOR OTHER LATITUDES							
TIME UT	LONG. E	LAT.	TIME CORR.	SOUTH-NORTH			TIME CORR.	NORTH-SOUTH		
				LONG. E	HT. M	BEAR. IN-1		LONG. E	HT. M	BEAR. IN-1
APRIL 21, 1963										
1 20.1	211.15	47.8	20.1	-82.69	877	90.0	20.1	-82.73	877	90.0
2 20.2	211.15	47.8	20.2	-82.69	890	12.5	20.2	-82.73	877	102.5
3 20.3	211.15	47.8	20.3	-82.69	902	60.8	20.3	-82.73	877	159.2
4 20.4	211.15	47.8	20.4	-82.69	911	55.1	20.4	-82.73	877	175.9
5 20.5	211.15	47.8	20.5	-82.69	919	50.9	20.5	-82.73	877	192.6
6 20.6	211.15	47.8	20.6	-82.69	925	43.7	20.6	-82.73	877	209.3
7 20.7	211.15	47.8	20.7	-82.69	930	38.9	20.7	-82.73	877	226.0
8 20.8	211.15	47.8	20.8	-82.69	934	34.9	20.8	-82.73	877	242.7
9 20.9	211.15	47.8	20.9	-82.69	937	31.7	20.9	-82.73	877	259.4
10 21.0	211.15	47.8	21.0	-82.69	939	29.2	21.0	-82.73	877	276.1
11 21.1	211.15	47.8	21.1	-82.69	940	27.3	21.1	-82.73	877	292.8
12 21.2	211.15	47.8	21.2	-82.69	940	26.0	21.2	-82.73	877	309.5
13 21.3	211.15	47.8	21.3	-82.69	939	25.3	21.3	-82.73	877	326.2
14 21.4	211.15	47.8	21.4	-82.69	937	25.2	21.4	-82.73	877	342.9
15 21.5	211.15	47.8	21.5	-82.69	934	25.7	21.5	-82.73	877	359.6
16 21.6	211.15	47.8	21.6	-82.69	929	26.8	21.6	-82.73	877	376.3
17 21.7	211.15	47.8	21.7	-82.69	922	28.4	21.7	-82.73	877	393.0
18 21.8	211.15	47.8	21.8	-82.69	913	30.5	21.8	-82.73	877	409.7
19 21.9	211.15	47.8	21.9	-82.69	902	33.1	21.9	-82.73	877	426.4
20 22.0	211.15	47.8	22.0	-82.69	889	36.2	22.0	-82.73	877	443.1
21 22.1	211.15	47.8	22.1	-82.69	874	39.8	22.1	-82.73	877	459.8
22 22.2	211.15	47.8	22.2	-82.69	857	43.9	22.2	-82.73	877	476.5
23 22.3	211.15	47.8	22.3	-82.69	838	48.5	22.3	-82.73	877	493.2
24 22.4	211.15	47.8	22.4	-82.69	817	53.6	22.4	-82.73	877	509.9
25 22.5	211.15	47.8	22.5	-82.69	794	59.2	22.5	-82.73	877	526.6
26 22.6	211.15	47.8	22.6	-82.69	769	65.3	22.6	-82.73	877	543.3
27 22.7	211.15	47.8	22.7	-82.69	742	71.9	22.7	-82.73	877	560.0
28 22.8	211.15	47.8	22.8	-82.69	713	79.0	22.8	-82.73	877	576.7
29 22.9	211.15	47.8	22.9	-82.69	682	86.6	22.9	-82.73	877	593.4
30 23.0	211.15	47.8	23.0	-82.69	649	94.7	23.0	-82.73	877	610.1
31 23.1	211.15	47.8	23.1	-82.69	614	103.3	23.1	-82.73	877	626.8

APRIL 22, 1963										
1 23.2	211.15	47.8	23.2	-82.69	577	112.4	23.2	-82.69	577	643.5
2 23.3	211.15	47.8	23.3	-82.69	542	122.0	23.3	-82.69	542	660.2
3 23.4	211.15	47.8	23.4	-82.69	505	132.1	23.4	-82.69	505	676.9
4 23.5	211.15	47.8	23.5	-82.69	467	142.7	23.5	-82.69	467	693.6
5 23.6	211.15	47.8	23.6	-82.69	427	153.8	23.6	-82.69	427	710.3
6 23.7	211.15	47.8	23.7	-82.69	386	165.4	23.7	-82.69	386	727.0
7 23.8	211.15	47.8	23.8	-82.69	343	177.5	23.8	-82.69	343	743.7
8 23.9	211.15	47.8	23.9	-82.69	299	190.1	23.9	-82.69	299	760.4
9 24.0	211.15	47.8	24.0	-82.69	254	203.2	24.0	-82.69	254	777.1
10 24.1	211.15	47.8	24.1	-82.69	208	216.8	24.1	-82.69	208	793.8
11 24.2	211.15	47.8	24.2	-82.69	161	230.9	24.2	-82.69	161	810.5
12 24.3	211.15	47.8	24.3	-82.69	113	245.5	24.3	-82.69	113	827.2
13 24.4	211.15	47.8	24.4	-82.69	64	260.6	24.4	-82.69	64	843.9
14 24.5	211.15	47.8	24.5	-82.69	14	276.2	24.5	-82.69	14	860.6
15 24.6	211.15	47.8	24.6	-82.69	-36	292.3	24.6	-82.69	-36	877.3
16 24.7	211.15	47.8	24.7	-82.69	-85	308.9	24.7	-82.69	-85	894.0
17 24.8	211.15	47.8	24.8	-82.69	-132	326.0	24.8	-82.69	-132	910.7
18 24.9	211.15	47.8	24.9	-82.69	-177	343.6	24.9	-82.69	-177	927.4
19 25.0	211.15	47.8	25.0	-82.69	-220	361.7	25.0	-82.69	-220	944.1
20 25.1	211.15	47.8	25.1	-82.69	-261	380.3	25.1	-82.69	-261	960.8
21 25.2	211.15	47.8	25.2	-82.69	-300	399.4	25.2	-82.69	-300	977.5
22 25.3	211.15	47.8	25.3	-82.69	-337	419.0	25.3	-82.69	-337	994.2
23 25.4	211.15	47.8	25.4	-82.69	-372	439.1	25.4	-82.69	-372	1010.9
24 25.5	211.15	47.8	25.5	-82.69	-405	459.7	25.5	-82.69	-405	1027.6
25 25.6	211.15	47.8	25.6	-82.69	-436	480.8	25.6	-82.69	-436	1044.3
26 25.7	211.15	47.8	25.7	-82.69	-465	502.4	25.7	-82.69	-465	1061.0
27 25.8	211.15	47.8	25.8	-82.69	-492	524.5	25.8	-82.69	-492	1077.7
28 25.9	211.15	47.8	25.9	-82.69	-517	547.1	25.9	-82.69	-517	1094.4
29 26.0	211.15	47.8	26.0	-82.69	-540	570.2	26.0	-82.69	-540	1111.1
30 26.1	211.15	47.8	26.1	-82.69	-561	593.8	26.1	-82.69	-561	1127.8
31 26.2	211.15	47.8	26.2	-82.69	-580	617.9	26.2	-82.69	-580	1144.5

APRIL 23, 1963										
1 26.3	211.15	47.8	26.3	-82.69	-597	642.5	26.3	-82.69	-597	1161.2
2 26.4	211.15	47.8	26.4	-82.69	-613	667.6	26.4	-82.69	-613	1177.9
3 26.5	211.15	47.8	26.5	-82.69	-627	693.2	26.5	-82.69	-627	1194.6
4 26.6	211.15	47.8	26.6	-82.69	-640	719.3	26.6	-82.69	-640	1211.3
5 26.7	211.15	47.8	26.7	-82.69	-651	745.9	26.7	-82.69	-651	1228.0
6 26.8	211.15	47.8	26.8	-82.69	-660	773.0	26.8	-82.69	-660	1244.7
7 26.9	211.15	47.8	26.9	-82.69	-667	800.6	26.9	-82.69	-667	1261.4
8 27.0	211.15	47.8	27.0	-82.69	-672	828.7	27.0	-82.69	-672	1278.1
9 27.1	211.15	47.8	27.1	-82.69	-675	857.3	27.1	-82.69	-675	1294.8
10 27.2	211.15	47.8	27.2	-82.69	-676	886.4	27.2	-82.69	-676	1311.5
11 27.3	211.15	47.8	27.3	-82.69	-674	916.0	27.3	-82.69	-674	1328.2
12 27.4	211.15	47.8	27.4	-82.69	-670	946.1	27.4	-82.69	-670	1344.9
13 27.5	211.15	47.8	27.5	-82.69	-663	976.7	27.5	-82.69	-663	1361.6
14 27.6	211.15	47.8	27.6	-82.69	-654	1007.8	27.6	-82.69	-654	1378.3
15 27.7	211.15	47.8	27.7	-82.69	-642	1039.4	27.7	-82.69	-642	1395.0
16 27.8	211.15	47.8	27.8	-82.69	-628	1071.5	27.8	-82.69	-628	1411.7
17 27.9	211.15	47.8	27.9	-82.69	-612	1104.1	27.9	-82.69	-612	1428.4
18 28.0	211.15	47.8	28.0	-82.69	-594	1137.2	28.0	-82.69	-594	1445.1
19 28.1	211.15	47.8	28.1	-82.69	-574	1170.8	28.1	-82.69	-574	1461.8
20 28.2	211.15	47.8	28.2	-82.69	-552	1204.9	28.2	-82.69	-552	1478.5
21 28.3	211.15	47.8	28.3	-82.69	-528	1239.5	28.3	-82.69	-528	1495.2
22 28.4	211.15	47.8	28.4	-82.69	-502	1274.6	28.4	-82.69	-502	1511.9
23 28.5	211.15	47.8	28.5	-82.69	-474	1310.2	28.5	-82.69	-474	1528.6
24 28.6	211.15	47.8	28.6	-82.69	-444	1346.3	28.6	-82.69	-444	1545.3
25 28.7	211.15	47.8	28.7	-82.69	-412	1382.9	28.7	-82.69	-412	1562.0
26 28.8	211.15	47.8	28.8	-82.69	-378	1420.0	28.8	-82.69	-378	1578.7
27 28.9	211.15	47.8	28.9	-82.69	-342	1457.6	28.9	-82.69	-342	1595.4
28 29.0	211.15	47.8	29.0	-82.69	-304	1495.7	29.0	-82.69	-304	1612.1
29 29.1	211.15	47.8	29.1	-82.69	-264	1534.3	29.1	-82.69	-264	1628.8
30 29.2	211.15	47.8	29.2	-82.69	-222	1573.4	29.2	-82.69	-222	1645.5
31 29.3	211.15	47.8	29.3	-82.69	-178	1613.0	29.3	-82.69	-178	1662.2

EQUINOX 3-4			SATELLITE 1967 JUNE 1 FOR OTHER LATITUDES								
TIME UT	LONG. E	LAT.	TIME CORR.	SOUTH-NORTH			TIME CORR.	NORTH-SOUTH			
				LONG. CORR.	HT. (M)	BEAR. (IN-1)		LONG. CORR.	HT. (M)	BEAR. (IN-1)	
APRIL 21, 1963											
1 20.1	211.15	47.8	20.1	-82.69	877	90.0		20.1	-82.69	877	90.0
2 20.2	211.15	47.8	20.2	-82.69	890	12.5		20.2	-82.69	877	102.5
3 20.3	211.15	47.8	20.3	-82.69	902	60.8		20.3	-82.69	877	159.2
4 20.4	211.15	47.8	20.4	-82.69	911	55.1		20.4	-82.69	877	175.9
5 20.5	211.15	47.8	20.5	-82.69	919	50.9		20.5	-82.69	877	192.6
6 20.6	211.15	47.8	20.6	-82.69	927	46.6		20.6	-82.69	877	209.3
7 20.7	211.15	47.8	20.7	-82.69	935	42.3		20.7	-82.69	877	226.0
8 20.8	211.15	47.8	20.8	-82.69	943	38.0		20.8	-82.69	877	242.7
9 20.9	211.15	47.8	20.9	-82.69	951	33.7		20.9	-82.69	877	259.4
10 21.0	211.15	47.8	21.0	-82.69	959	29.4		21.0	-82.69	877	276.1
11 21.1	211.15	47.8	21.1	-82.69	967	25.1		21.1	-82.69	877	292.8
12 21.2	211.15	47.8	21.2	-82.69	975	20.8		21.2	-82.69	877	309.5
13 21.3	211.15	47.8	21.3	-82.69	983	16.5		21.3	-82.69	877	326.2
14 21.4	211.15	47.8	21.4	-82.69	991	12.2		21.4	-82.69	877	342.9
15 21.5	211.15	47.8	21.5	-82.69	999	7.9		21.5	-82.69	877	359.6
16 21.6	211.15	47.8	21.6	-82.69	1007	3.6		21.6	-82.69	877	376.3
17 21.7	211.15	47.8	21.7	-82.69	1015	-0.7		21.7	-82.69	877	393.0
18 21.8	211.15	47.8	21.8	-82.69	1023	-4.4		21.8	-82.69	877	409.7
19 21.9	211.15	47.8	21.9	-82.69	1031	-8.1		21.9	-82.69	877	426.4
20 22.0	211.15	47.8	22.0	-82.69	1039	-11.8		22.0	-82.69	877	443.1
21 22.1	211.15	47.8	22.1	-82.69	1047	-15.5		22.1	-82.69	877	459.8
22 22.2	211.15	47.8	22.2	-82.69	1055	-19.2		22.2	-82.69	877	476.5
23 22.3	211.15	47.8	22.3	-82.69	1063	-22.9		22.3	-82.69	877	493.2
24 22.4	211.15	47.8	22.4	-82.69	1071	-26.6		22.4	-82.69	877	509.9
25 22.5	211.15	47.8	22.5	-82.69	1079	-30.3		22.5	-82.69	877	526.6
26 22.6	211.15	47.8	22.6	-82.69	1087	-34.0		22.6	-82.69	877	543.3
27 22.7	211.15	47.8	22.7	-82.69	1095	-37.7		22.7	-82.69	877	560.0
28 22.8	211.15	47.8	22.8	-82.69	1103	-41.4		22.8	-82.69	877	576.7
29 22.9	211.15	47.8	22.9	-82.69	1111	-45.1		22.9	-82.69	877	593.4
30 23.0	211.15	47.8	23.0	-82.69	1119	-48.8		23.0	-82.69	877	610.1
31 23.1	211.15	47.8	23.1	-82.69	1127	-52.5		23.1	-82.69	877	626.8
32 23.2	211.15	47.8	23.2	-82.69	1135	-56.2		23.2	-82.69	877	643.5
33 23.3	211.15	47.8	23.3	-82.69	1143	-59.9		23.3	-82.69	877	660.2
34 23.4	211.15	47.8	23.4	-82.69	1151	-63.6		23.4	-82.69	877	676.9
35 23.5	211.15	47.8	23.5	-82.69	1159	-67.3		23.5	-82.69	877	693.6
36 23.6	211.15	47.8	23.6	-82.69	1167	-71.0		23.6	-82.69	877	710.3
37 23.7	211.15	47.8	23.7	-82.69	1175	-74.7		23.7	-82.69	877	727.0
38 23.8	211.15	47.8	23.8	-82.69	1183	-78.4		23.8	-82.69	877	743.7
39 23.9	211.15	47.8	23.9	-82.69	1191	-82.1		23.9	-82.69	877	760.4
40 24.0	211.15	47.8	24.0	-82.69	1199	-85.8		24.0	-82.69	877	777.1
41 24.1	211.15	47.8	24.1	-82.69	1207	-89.5		24.1	-82.69	877	793.8
42 24.2	211.15	47.8	24.2	-82.69	1215	-93.2		24.2	-82.69	877	810.5
43 24.3	211.15	47.8	24.3	-82.69	1223	-96.9		24.3	-82.69	877	827.2
44 24.4	211.15	47.8	24.4	-82.69	1231	-100.6		24.4	-82.69	877	843.9
45 24.5	211.15	47.8	24.5	-82.69	1239	-104.3		24.5	-82.69	877	860.6
46 24.6	211.15	47.8	24.6	-82.69	1247	-108.0		24.6	-82.69	877	877.3
47 24.7	211.15	47.8	24.7	-82.69	1255	-111.7		24.7	-82.69	877	894.0
48 24.8	211.15	47.8	24.8	-82.69	1263	-115.4		24.8	-82.69	877	910.7
49 24.9	211.15	47.8	24.9	-82.69	1271	-119.1		24.9	-82.69	877	927.4
50 25.0	211.15	47.8	25.0	-82.69	1279	-122.8		25.0	-82.69	877	944.1
51 25.1	211.15	47.8	25.1	-82.69	1287	-126.5		25.1	-82.69	877	960.8
52 25.2	211.15	47.8	25.2	-82.69	1295	-130.2		25.2	-82.69	877	977.5
53 25.3	211.15	47.8	25.3	-82.69	1303	-133.9		25.3	-82.69	877	994.2
54 25.4	211.15	47.8	25.4	-82.69	1311	-137.6		25.4	-82.69	877	1010.9
55 25.5	211.15	47.8	25.5	-82.69	1319	-141.3		25.5	-82.69	877	1027.6
56 25.6	211.15	47.8	25.6	-82.69	1327	-145.0		25.6	-82.69	877	1044.3
57 25.7	211.15	47.8	25.7	-82.69	1335	-148.7		25.7	-82.69	877	1061.0
58 25.8	211.15	47.8	25.8	-82.69	1343	-152.4		25.8	-82.69	877	1077.7
59 25.9	211.15	47.8	25.9	-82.69	1351	-156.1		25.9	-82.69	877	1094.4
60 26.0	211.15	47.8	26.0	-82.69	1359	-159.8		26.0	-82.69	877	1111.1
61 26.1	211.15	47.8	26.1	-82.69	1367	-163.5		26.1	-82.69	877	1127.8
62 26.2	211.15	47.8	26.2	-82.69	1375	-167.2		26.2	-82.69	877	1144.5
63 26.3	211.15	47.8	26.3	-82.69	1383	-170.9		26.3	-82.69	877	1161.2
64 26.4	211.15	47.8	26.4	-82.69	1391	-174.6		26.4	-82.69	877	1177.9
65 26.5	211.15	47.8	26.5	-82.69	1399	-178.3		26.5	-82.69	877	1194.6
66 26.6	211.15	47.8	26.6	-82.69	1407	-182.0		26.6	-82.69	877	1211.3
67 26.7	211.15	47.8	26.7	-82.69	1415	-185.7		26.7	-82.69	877	1228.0
68 26.8	211.15	47.8	26.8	-82.69	1423	-189.4		26.8	-82.69	877	1244.7
69 26.9	211.15	47.8	26.9	-82.69	1431	-193.1		26.9	-82.69	877	1261.4
70 27.0	211.15	47.8	27.0	-82.69	1439	-196.8		27.0	-82.69	877	1278.1
71 27.1	211.15	47.8	27.1	-82.69	1447	-200.5		27.1	-82.69	877	1294.8
72 27.2	211.15	47.8	27.2	-82.69	1455	-204.2		27.2	-82.69	877	1311.5
73 27.3	211.15	47.8	27.3	-82.69	1463	-207.9		27.3	-82.69	877	1328.2
74 27.4	211.15	47.8	27.4	-82.69	1471	-211.6		27.4	-82.69	877	1344.9
75 27.5	211.15	47.8	27.5	-82.69	1479	-215.3		27.5	-82.69	877	1361.6
76 27.6	211.15	47.8	27.6	-82.69	1487	-219.0		27.6	-82.69	877	1378.3
77 27.7	211.15	47.8	27.7	-82.69	1495	-222.7		27.7	-82.69	877	1395.0
78 27.8	211.15	47.8	27.8	-82.69	1503	-226.4		27.8	-82.69	877	1411.7
79 27.9	211.15	47.8	27.9	-82.69	1511	-230.1		27.9	-82.69	877	1428.4
80 28.0	211.15	47.8	28.0	-82.69	1519	-233.8		28.0	-82.69	877	1445.1
81 28.1	211.15	47.8	28.1	-82.69	1527	-237.5		28.1	-82.69	877	1461.8
82 28.2	211.15	47.8	28.2	-82.69	1535	-241.2		28.2	-82.69	877	1478.5
83 28.3	211.15	47.8	28.3	-82.69	1543	-244.9		28.3	-82.69	877	1495.2
84 28.4	211.15	47.8	28.4	-82.69	1551	-248.6		28.4	-82.69	877	1511.9
85 28.5	211.15	47.8	28.5	-82.69	1559	-252.3		28.5	-82.69	877	1528.6
86 28.6	211.15	47.8	28.6	-82.69	1567	-256.0		28.6	-82.69	877	1545.3
87 28.7	211.15	47.8	28.7	-82.69	1575	-259.7		28.7	-82.69	877	1562.0
88 28.8	211.15	47.8	28.8	-82.69	1583	-263.4		28.8	-82.69	877	1578.7
89 28.9	211.15	47.8	28.9	-82.69	1591	-267.1		28.9	-82.69	877	1595.4
90 29.0	211.15	47.8	29.0	-82.69	1599	-270.8		29.0	-82.69	877	1612.1
91 29.1	211.15	47.8	29.1	-82.69	1607	-274.5		29.1	-82.69	877	1628.8
92 29.2	211.15	47.8	29.2	-82.69	1615	-278.2		29.2	-82.69	877	1645.5
93 29.3	211.15	47.8	29.3	-82.69	1623	-281.9		29.3	-82.69	877	1662.2
94 29.4	211.15	47.8	29.4	-82.69	1631	-285.6		29.4	-82.69	877	1678.9
95 29.5	211.15	47.8	29.5	-82.69	1639	-289.3		29.5	-82.69	877	1695.6
96 29.6	211.15	47.8	29.6	-82.69	1647	-293.0		29.6	-82.69	877	1712.3
97 29.7	211.15	47.8	29.7	-82.69	1655	-296.7		29.7	-82.69	877	1729.0
98 29.8	211.15	47.8	29.8	-82.69	1663	-300.4		29.8	-82.69	877	1745.7
99 29.9	211.15	47.8	29.9	-82.69	1671	-304.1		29.9	-82.69	877	1762.4
100 30.0	211.15	47.8	30.0	-82.69	1679	-307.8		30.0	-82.69	877	1779.1

PROJECT 10073 RECORD CARD

1. DATE 24 April 1963		2. LOCATION Kauai, Hawaii		12. CONCLUSIONS <input type="checkbox"/> Was Balloon <input type="checkbox"/> Probably Balloon <input type="checkbox"/> Possibly Balloon <input checked="" type="checkbox"/> Was Aircraft <input type="checkbox"/> Probably Aircraft <input type="checkbox"/> Possibly Aircraft <input type="checkbox"/> Was Astronomical <input type="checkbox"/> Probably Astronomical <input type="checkbox"/> Possibly Astronomical <input checked="" type="checkbox"/> Other <u>ECHO</u> <input type="checkbox"/> Insufficient Data for Evaluation <input type="checkbox"/> Unknown	
3. DATE-TIME GROUP Local _____ GMT 25/0605Z		4. TYPE OF OBSERVATION <input checked="" type="checkbox"/> Ground-Visual <input type="checkbox"/> Ground-Radar <input type="checkbox"/> Air-Visual <input type="checkbox"/> Air-Intercept Radar			
5. PHOTOS <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No		6. SOURCE Civilian			
7. LENGTH OF OBSERVATION Not Reported		8. NUMBER OF OBJECTS One		9. COURSE ESE	
10. BRIEF SUMMARY OF SIGHTING Starlike object, high altitude, bright moving slow from WSN to ESE. Jet a/c on high speed test run in area at this time.				11. COMMENTS Possibility of a/c, however, ECHO was visible to the SW and SE of observer at reported time.	